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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,831	12/06/2001	Tomoyuki Nakano	2001_1808A	6298

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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

CARTER, AARON W

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,831

Applicant(s)

NAKANO ET AL.

Examiner

Aaron W. Carter

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 8 is/are allowed.
- 6) ☒ Claim(s) 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/03/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-4 and 8 in the reply filed on 12/14/2004 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,911,456 to Tsubouchi et al. ("Tsubouchi").

As to claim 4, Tsubouchi discloses a method for mounting a component, comprising the steps of:

Recognizing the condition of a sucked component which is fed from a component-feeding unit, sucked and taken out (column 4, lines 52-56);

Recognizing the condition of a secured circuit-formed substrate which is carried, regulated and secured (column 4, lines 9-13, wherein the board corresponds to the circuit formed substrate);

Recognizing the position and inclination of at least one individual substrate provided by sectioning the circuit-formed substrate (column 4, lines 9-13, wherein the board corresponds to a individual substrate);

Calculating correction amounts for the position and inclination of the component to be mounted, based on the results of the recognition of the component-sucking condition, the circuit-formed substrate-securing condition, and the position and inclination of the individual substrate (column 5, lines 30-44); and

Making necessary correction on the component based on the result of said calculation, and mounting the component at a predetermined position on the individual substrate (column 5, lines 30-40);

Wherein a position at which a substrate-recognition camera should recognize the position and inclination of said individual substrate is controlled based on the result of the recognition of the circuit-formed substrate-securing condition (column 4, lines 22-29, wherein second camera corresponds to substrate-recognition camera).

Allowable Subject Matter

4. Claims 1-3 and 8 are allowed.

5. The following is an examiner's statement of reasons for allowance:

As to claims 1, 2 and 8, none of the prior art teach or fairly suggests a bad mark indicating a defective individual substrate, a individual substrate mark for recognizing a position and inclination of at least one individual substrate, wherein said bad mark is indicated on said

Art Unit: 2625

individual substrate mark. USPN 6,079,098 to Soellner et al. discloses a bad mark for indicating a defective individual substrate along with an individual substrate mark for indicating position and inclination of an individual substrate, he does not teach or fairly suggest that the bad mark is indicated on the individual substrate mark.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,216,341 to Nakahara discloses calculating component correction for mounting.

USPN 5,084,959 to Ando et al. discloses calculating component correction for mounting.

USPN 5,992,013 to Morita discloses calculating component correction for mounting.

USPN 5,249,356 to Okuda et al. discloses calculating component correction for mounting.

USPN 5,547,537 to Reynolds et al. discloses calculating component correction for mounting.

USPN 5,851,848 to Balamurugan discloses defect and position marks.

USPN 6,016,358 to Balamurugan discloses defect and position marks.

USPN 5,983,490 to Sakemi discloses defect and position marks.

Art Unit: 2625

USPN 6,546,985 to Aoki discloses defect and position marks.

USPN 6,457,232 to Isogani et al. discloses defect and position marks.

USPN 5,256,578 to Corley et al. discloses defect and position marks.

USPN 6,410,927 to Pike discloses defect and position marks.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445.

The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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BHAVESH M. MENTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600